AMENDMENT TO THE CLAIMS

Please cancel claims 14, 15, 17, 18, 20 and 21.

Please amend claims 16 and 19.

Please add new claims 22 and 23 as shown in the following complete list of claims.

1.-15. (Canceled).

16. (Currently amended) ~~The~~ A method of ~~Claim 14,~~ inhibiting transferrin receptor (TfR) binding to transferrin, comprising administering to a subject a therapeutically effective amount of a compound comprising the formula:

Z_1-X_1-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-X_{13}-X_{14}-X_{15}-X_{16}-X_{17}-Z_2

wherein:

X_1 is Gly;

X_2 is Trp or Ala;

X_3 is Asp or Ala;

X_4 is His;

X_5 is Met;

X_6 is Phe;

X_7 is Thr;

X_8 is Val;

X_9 is Asp or Ala;

X_{10} is Phe;

X_{11} is Trp;

X_{12} is Thr;

X_{13} is Ile;

X_{14} is Met;

X_{15} is Glu;

X_{16} is Asn;

X_{17} is His or Ala;

Z_1 is H_2N-;

Z_2 is -C(O)OH; and

each "—" between residues X_1 through X_{17} is an amide linkage; [[.]]

wherein the compound reduces cell-associated binding of transferrin as measured in an *in vitro* cellular binding assay and produces at least an additive effect with soluble

HFE/β_2m heterodimers in reducing cell-associated binding of transferrin as measured in the assay.

17.-18. (Canceled).

19. (Previously Added) ~~The~~ A method of ~~Claim 17,~~ treating an iron overload disease, comprising administering to a subject a therapeutically effective amount of a compound comprising the formula:

Z_1-X_1-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-X_{13}-X_{14}-X_{15}-X_{16}-X_{17}-Z_2

wherein:

X_1 is Gly;

X_2 is Trp or Ala;

X_3 is Asp or Ala;

X_4 is His;

X_5 is Met;

X_6 is Phe;

X_7 is Thr;

X_8 is Val;

X_9 is Asp or Ala;

X_{10} is Phe;

X_{11} is Trp;

X_{12} is Thr;

X_{13} is Ile;

X_{14} is Met;

X_{15} is Glu;

X_{16} is Asn;

X_{17} is His or Ala;

Z_1 is H_2N-;

Z_2 is -C(O)OH; and

each "—" between residues X_1 through X_{17} is an amide linkage; [[.]]

wherein the compound reduces cell-associated binding of transferrin as measured in an in vitro cellular binding assay and produces at least an additive effect with soluble HFE/β_2m heterodimers in reducing cell-associated binding of transferrin as measured in the assay.

20.-21. (Canceled).

22. (New) A method of inhibiting TfR binding to transferrin, comprising administering to a subject a therapeutically effective amount of a compound comprising a peptide sequence of SEQ ID NO: 1 in which one amino acid is conservatively substituted and wherein the compound reduces cell-associated binding of transferrin as measured in an *in vitro* cellular binding assay and produces at least an additive effect with soluble HFE/β_2m heterodimers in reducing cell-associated binding of transferrin as measured in the assay.

23. (New) A method of treating an iron overload disease, comprising administering to a subject a therapeutically effective amount of a compound comprising a peptide sequence of SEQ ID NO: 1 in which one or more amino acids are conservatively substituted and wherein the compound reduces cell-associated binding of transferrin as measured in an *in vitro* cellular binding assay and produces at least an additive effect with soluble HFE/β_2m heterodimers in reducing cell-associated binding of transferrin as measured in the assay.